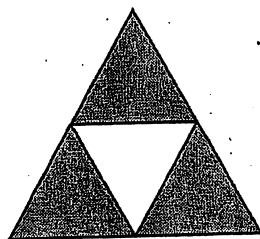


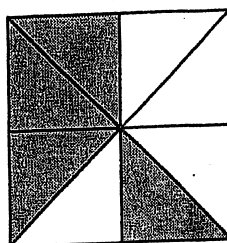
Parts of a Region

Write a fraction for the part of the region below that is shaded.

1.



2.



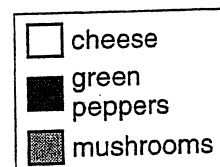
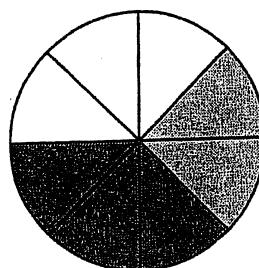
Draw a model to show each fraction.

3. $\frac{2}{4}$

4. $\frac{10}{25}$

5. What fraction of the pizza is cheese?

6. What fraction of the pizza is mushroom?

7. **Number Sense** Is $\frac{1}{4}$ of 12 greater than $\frac{1}{4}$ of 8? Explain your answer.

Test Prep

8. A region has 12 equal squares. Which is the number of squares in $\frac{1}{3}$ of the region?

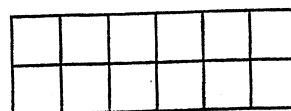
A. 3

B. 4

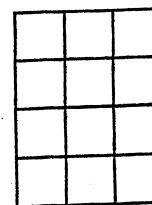
C. 6

D. 9

9. **Writing in Math** Explain why $\frac{1}{2}$ of Region A is not larger than $\frac{1}{2}$ of Region B.



Region A

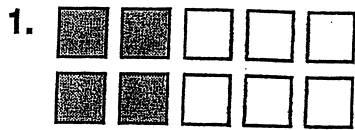


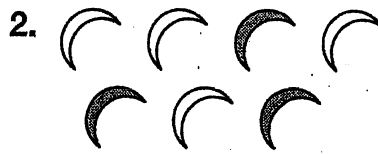
Region B

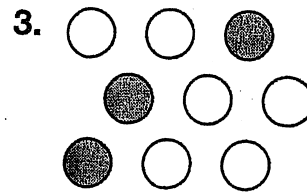
Parts of a Set

P 9-2

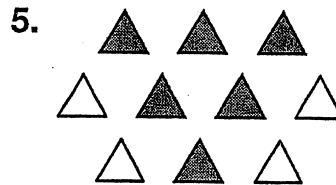
What fraction of each set is shaded?











Draw a picture to show each fraction as part of a set.

6. $\frac{3}{6}$

7. $\frac{2}{5}$

8. **Number Sense** $\frac{5}{5}$ of the models that Brian has are airplanes. How many are cars?

Test Prep

9. What fraction of the half-circles is shaded?

A. $\frac{1}{8}$

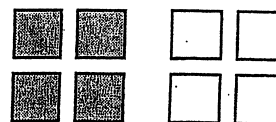
B. $\frac{1}{2}$

C. $\frac{3}{4}$

D. $\frac{2}{8}$



10. **Writing in Math** Frank said that $\frac{1}{2}$ of the squares to the right are shaded. Is he correct? Explain.

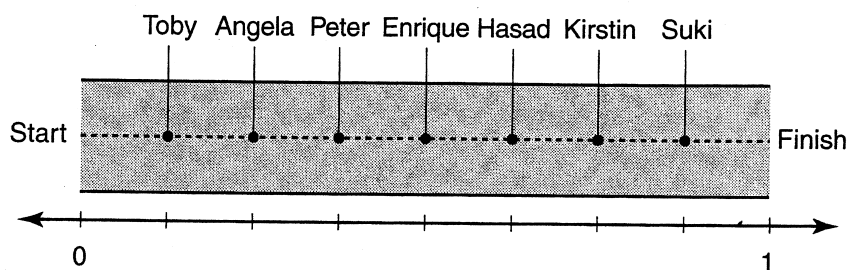


Name _____

Fractions, Length, and the Number Line

PS 9-3

Foot Race Seven people are running in a race. The picture shows how much of the race each person has completed. Write a fraction for how much of the race each person has completed. Use the number line to help.



1. Peter _____
2. Suki _____
3. Hasad _____
4. Angela _____
5. Kirstin _____
6. Toby _____
7. Enrique _____
8. Who has run the least distance? _____
9. **Writing in Math** Write a fraction for how much farther Angela must run to finish the race. Explain how you used the picture to find this fraction.

Name _____

Paper Fun

E 9-3
NUMBER SENSE

Read the steps in the box. Then answer the questions.

Step 1: Tyler and Ashley each have a rectangular sheet of paper.

Step 2: Tyler folds his paper in half and Ashley folds her paper into three equal parts.

Step 3: Tyler and Ashley open their papers and label the creased lines with a fraction that represents the length of the paper at the creased line.

Step 4: Tyler and Ashley refold the paper as in step 2.

Step 5: Tyler folds his paper into three equal parts and Ashley folds her paper into two equal parts.

Step 6: Tyler and Ashley open their papers and label the creased lines with fractions that represent the length of the paper at each creased line.

1. What fraction did Tyler and Ashley write on the creased line of their papers in step 3?

2. What fractions did Tyler and Ashley write on the creased lines of their papers in step 6?

3. Are there any creases on Ashley's paper that are labeled differently than those on Tyler's paper? What are they?

4. Are there any creases on Tyler's paper that are labeled differently than those on Ashley's paper? What are they?

Name _____

Time After Time

E 9-4
ESTIMATION

JANUARY						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

APRIL						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

JULY						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

OCTOBER						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Estimate the fraction of each month that passed before the date given.

1. January 8 _____
2. October 17 _____
3. April 16 _____
4. July 5 _____
5. October 10 _____
6. January 25 _____
7. July 6 _____
8. April 30 _____

Fractions

(Answer ID # 0341241)

Complete.

1. One-fourth of the students in James' class in Perth are immigrants. If there are thirty-six people in the class, how many students are not immigrants?	2. Angelina is making sopaipillas to share with her class when she tells them about the history of Mexican Independence Day. The sopaipillas are so good, especially with honey, and Angelina is sure everyone will want to eat more than one! It takes three cups of flour, two teaspoons of sugar, one tablespoon of baking powder, one-fifth of a cup of shortening, one and a third teaspoons salt, and one and three-fourths cups of water to make fourteen servings. If Angelina wants to make 70 servings, how much of each ingredient will she need?
3. "They" are found on Mars, Venus and Earth. As far as is known there are eighty-four of "them." If twenty-eight are on Mars, and thirty are on Earth, what fraction of "them" are on Venus?	4. Catharina's father harvests eighty-two ears of maize every hour. How many ears does he harvest in two-fifths of an hour?
5. Mr. Hawkins had received one hundred fifty acres as his headright when he came to the Plymouth Colony. He gave one-fifth of his land to his brother. How many acres did he have left?	6. Chef Justin was very particular about the ingredients he used in his pizzas. He even ordered the mozzarella directly from Italy. His favorite mozzarella was Mozzarella di Bufala, made in Campania. It costs \$9.94 per pound. He used half of a pound of this very special mozzarella on each pizza. If Chef Justin made forty-two pizzas with the Mozzarella di Bufala, how much would that amount of cheese cost?

Name _____

PROBLEM-SOLVING STRATEGY

P 9-5

Draw a Picture

Solve each problem. Write the answer in a complete sentence.

1. Three friends divided a veggie pizza into 12 slices. If they divide the pizza equally, what fraction of the pizza would each friend get?

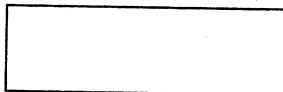
2. Mark is making a quilt with his grandmother. Each row of the quilt has 6 squares. There are 8 rows. $\frac{1}{2}$ of the squares are blue. How many blue squares are in the quilt?

3. Jane pulled weeds in the garden 7 times. She was paid \$5 each time she pulled weeds for less than 1 hr and \$6 each time she pulled weeds for more than 1 hr. If Jane received \$39, how many times did she pull weeds for more than 1 hr?

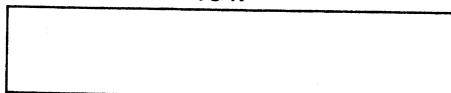
4. Neil needs to cut 3 long boards into 9 smaller boards. The first is 10 ft, the second is 16 ft, and the third is 18 ft. The table lists the smaller boards Neil needs. Use a drawing to show how he can divide the 3 boards so there is no waste.

Length of Board	Number Needed
4 ft	3
5 ft	4
6 ft	2

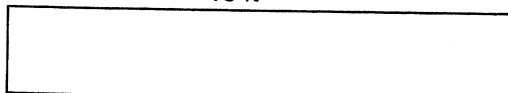
10 ft



16 ft



18 ft



Equivalent Fractions

P 9-6

Multiply or divide to find equivalent fractions.

1. $\frac{3}{8} \xrightarrow{\times 3} \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}} \xrightarrow{\times 3}$

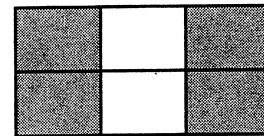
2. $\frac{12}{24} \xrightarrow{\div 2} \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}} \xrightarrow{\div 2}$

3. $\frac{8}{24} \xrightarrow{\div 8} \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}} \xrightarrow{\div 8}$

4. $\frac{5}{7} \xrightarrow{\times 2} \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}} \xrightarrow{\times 2}$

5. $\frac{11}{22}$ _____ 6. $\frac{1}{5}$ _____ 7. $\frac{5}{8}$ _____ 8. $\frac{12}{30}$ _____

9. **Number Sense** Write two fractions that name the shaded part in the figure to the right. Explain how your fractions are equivalent.



Test Prep

10. Which is NOT an equivalent fraction to $\frac{2}{3}$?

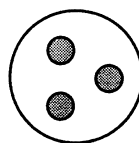
A. $\frac{4}{6}$

B. $\frac{6}{9}$

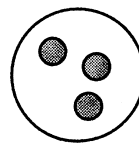
C. $\frac{9}{12}$

D. $\frac{10}{15}$

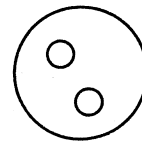
11. **Writing in Math** 12 counters are arranged in 4 dishes as shown. How could you rearrange the shaded or white counters to clearly show two equivalent fractions? What are the fractions?



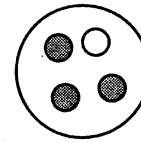
1



2



3



4

Fractions 9-6

(Answer ID # 1038933)

Fill in the missing number.

1. $\frac{\square}{55} = \frac{2}{5}$	2. $\frac{1}{3} = \frac{\square}{15}$	3. $\frac{\square}{32} = \frac{3}{4}$
4. $\frac{15}{\square} = \frac{1}{2}$	5. $\frac{36}{54} = \frac{4}{\square}$	6. $\frac{35}{9} = \frac{\square}{144}$
7. $\frac{187}{204} = \frac{11}{\square}$	8. $\frac{12}{\square} = \frac{204}{255}$	9. $\frac{6}{\square} = \frac{114}{266}$
10. $\frac{130}{104} = \frac{10}{\square}$	11. $\frac{15}{\square} = \frac{1}{11}$	12. $\frac{4}{10} = \frac{56}{\square}$
13. $\frac{10}{13} = \frac{\square}{208}$	14. $\frac{\square}{77} = \frac{6}{7}$	15. $\frac{1}{3} = \frac{\square}{51}$
16. $\frac{\square}{45} = \frac{22}{9}$	17. $\frac{\square}{110} = \frac{3}{10}$	18. $\frac{\square}{7} = \frac{12}{42}$
19. $\frac{893}{\square} = \frac{47}{13}$	20. $\frac{1}{2} = \frac{\square}{18}$	21. $\frac{28}{32} = \frac{7}{\square}$
22. $\frac{4}{\square} = \frac{24}{36}$	23. $\frac{9}{15} = \frac{\square}{225}$	24. $\frac{36}{33} = \frac{12}{\square}$

Fraction Strips

1											
$\frac{1}{2}$						$\frac{1}{2}$					
$\frac{1}{3}$				$\frac{1}{3}$				$\frac{1}{3}$			
$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$		
$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$	
$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$	
$\frac{1}{8}$		$\frac{1}{8}$		$\frac{1}{8}$		$\frac{1}{8}$		$\frac{1}{8}$		$\frac{1}{8}$	
$\frac{1}{9}$		$\frac{1}{9}$		$\frac{1}{9}$		$\frac{1}{9}$		$\frac{1}{9}$		$\frac{1}{9}$	
$\frac{1}{10}$		$\frac{1}{10}$		$\frac{1}{10}$		$\frac{1}{10}$		$\frac{1}{10}$		$\frac{1}{10}$	
$\frac{1}{12}$		$\frac{1}{12}$		$\frac{1}{12}$		$\frac{1}{12}$		$\frac{1}{12}$		$\frac{1}{12}$	

Name _____

Fractions in Simplest Form

P 9-7

Write each fraction in simplest form. If it is in simplest form, write *simplest form*.

1. $\frac{7}{8}$ _____

2. $\frac{2}{14}$ _____

3. $\frac{3}{9}$ _____

4. $\frac{7}{7}$ _____

5. $\frac{5}{30}$ _____

6. $\frac{20}{36}$ _____

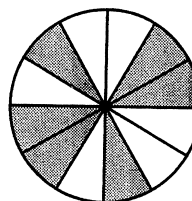
7. $\frac{7}{15}$ _____

8. $\frac{16}{22}$ _____

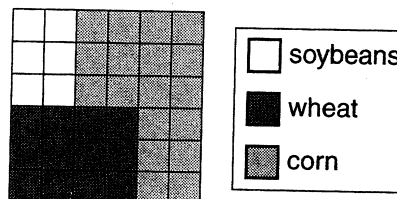
9. $\frac{8}{12}$ _____

10. $\frac{27}{36}$ _____

11. **Number Sense** What fraction of the region to the right is shaded? Write your answer in simplest form. Explain how you know.



Give each fraction in simplest form.
What fraction of the farm to the right is



12. soybeans? _____

13. wheat? _____

14. corn? _____

Test Prep

15. Which fraction is in simplest form?

A. $\frac{6}{24}$

B. $\frac{7}{24}$

C. $\frac{8}{24}$

D. $\frac{9}{24}$

16. **Writing in Math** Is $\frac{11}{33}$ written in simplest form? How do you know?

Fractions 9-7

(Answer ID # 0333123)

Write each fraction in simplest form.

1. $\frac{21}{24}$	2. $\frac{7}{21}$	3. $\frac{5}{10}$	4. $\frac{18}{54}$
5. $\frac{12}{20}$	6. $\frac{32}{56}$	7. $\frac{11}{25}$	8. $\frac{60}{132}$
9. $\frac{90}{100}$	10. $\frac{42}{48}$	11. $\frac{10}{12}$	12. $\frac{8}{24}$
13. $\frac{11}{22}$	14. $\frac{10}{35}$	15. $\frac{72}{108}$	16. $\frac{72}{99}$
17. $\frac{16}{20}$	18. $\frac{9}{35}$	19. $\frac{36}{42}$	20. $\frac{16}{32}$
21. $\frac{24}{27}$	22. $\frac{11}{40}$	23. $\frac{24}{36}$	24. $\frac{81}{90}$
25. $\frac{13}{38}$	26. $\frac{4}{8}$	27. $\frac{70}{80}$	28. $\frac{12}{24}$
29. $\frac{10}{34}$	30. $\frac{8}{16}$	31. $\frac{18}{21}$	32. $\frac{9}{81}$

Name _____

Comparing and Ordering Fractions

P 9-9

Compare. Write $>$, $<$, or $=$ for each \bigcirc .

1. $\frac{2}{5} \bigcirc \frac{5}{10}$

2. $\frac{11}{16} \bigcirc \frac{5}{8}$

3. $\frac{4}{5} \bigcirc \frac{8}{9}$

4. $\frac{3}{6} \bigcirc \frac{6}{12}$

5. $\frac{2}{7} \bigcirc \frac{3}{10}$

6. $\frac{1}{4} \bigcirc \frac{2}{11}$

7. **Number Sense** Without multiplying, Emily knew that $\frac{4}{9}$ was greater than $\frac{4}{10}$. Explain how she knew.

Order the numbers from least to greatest.

8. $\frac{4}{15}, \frac{2}{5}, \frac{1}{3}$ _____

9. $\frac{4}{10}, \frac{2}{8}, \frac{1}{5}$ _____

10. $\frac{1}{9}, \frac{7}{8}, \frac{5}{6}$ _____

11. $\frac{3}{9}, \frac{1}{4}, \frac{5}{12}$ _____

12. $\frac{13}{16}, \frac{5}{8}, \frac{2}{8}$ _____

13. $\frac{1}{2}, \frac{7}{12}, \frac{4}{10}$ _____

Test Prep

14. Which fraction is greater than $\frac{1}{3}$?

A. $\frac{3}{6}$

B. $\frac{11}{36}$

C. $\frac{1}{4}$

D. $\frac{1}{12}$

15. **Writing in Math** Explain how you know that $\frac{31}{40}$ is greater than $\frac{3}{4}$, but less than $\frac{4}{5}$.

Name _____

Comparing Outcomes

E 9-8
DATA

Tiffany tossed a number cube 12 times. Then she made a tally chart to show each time the cube showed each face.

Face	1	2	3	4	5	6
Number	I	III	II		II	IIII

1. Complete the table to show the fraction of tosses for each face of the number cube.

Face	1	2	3	4	5	6
Fraction (out of 12 tosses)	$\frac{1}{12}$					

2. Compare the fractional results for each face by writing $>$, $<$, or $=$ in each .

A. Face 1 Face 2

B. Face 3 Face 5

C. Face 5 Face 4

D. Face 2 Face 6

Tiffany tossed a coin 10 times and had 6 heads and 4 tails.
Then she tossed a coin 20 times and had 8 heads and 12 tails.

3. Complete the table to show the fractions of heads and tails Tiffany tossed.

Outcome	Heads	Tails
Fraction out of 10		
Fraction out of 20		

4. Compare the fractional results for each set of tosses by writing $>$, $<$, or $=$ in each .

A. heads out of 10 tails out of 10

B. heads out of 20 tails out of 20

C. heads out of 10 heads out of 20

D. heads out of 10 tails out of 20

Fractions 9-8

(Answer ID # 0144555)

Compare. Write <, >, or =.

1. $\frac{5}{9}$ $\frac{2}{10}$	2. $\frac{4}{28}$ $\frac{3}{21}$	3. $\frac{8}{10}$ $\frac{6}{12}$
4. $\frac{2}{7}$ $\frac{4}{6}$	5. $\frac{10}{25}$ $\frac{2}{5}$	6. $\frac{5}{13}$ $\frac{8}{11}$
7. $\frac{5}{15}$ $\frac{8}{21}$	8. $\frac{6}{27}$ $\frac{5}{26}$	9. $\frac{2}{31}$ $\frac{23}{25}$
10. $\frac{6}{15}$ $\frac{12}{13}$	11. $\frac{9}{15}$ $\frac{10}{11}$	12. $\frac{26}{28}$ $\frac{3}{22}$
13. $\frac{2}{16}$ $\frac{21}{22}$	14. $\frac{5}{6}$ $\frac{4}{10}$	15. $\frac{20}{28}$ $\frac{15}{21}$
16. $\frac{12}{28}$ $\frac{14}{27}$	17. $\frac{2}{3}$ $\frac{10}{15}$	18. $\frac{5}{10}$ $\frac{4}{12}$
19. $\frac{2}{20}$ $\frac{19}{23}$	20. $\frac{6}{10}$ $\frac{11}{16}$	21. $\frac{5}{12}$ $\frac{2}{15}$
22. $\frac{1}{27}$ $\frac{20}{24}$	23. $\frac{4}{19}$ $\frac{3}{16}$	24. $\frac{25}{35}$ $\frac{5}{7}$
25. $\frac{3}{10}$ $\frac{6}{9}$	26. $\frac{5}{11}$ $\frac{8}{10}$	27. $\frac{13}{15}$ $\frac{1}{19}$
28. $\frac{4}{26}$ $\frac{585}{25}$	29. $\frac{9}{18}$ $\frac{482}{23}$	30. $\frac{3}{6}$ $\frac{4}{5}$

Fractions 9-9

(Answer ID # 0630303)

Order the fractions from least to greatest.

1. $\frac{1}{7}$, $\frac{8}{11}$, $\frac{1}{2}$	2. $\frac{5}{10}$, $\frac{7}{9}$, $\frac{3}{5}$	3. $\frac{2}{3}$, $\frac{2}{12}$, $\frac{1}{4}$
4. $\frac{3}{6}$, $\frac{4}{11}$, $\frac{6}{8}$	5. $\frac{2}{5}$, $\frac{3}{4}$, $\frac{1}{2}$	6. $\frac{7}{8}$, $\frac{1}{12}$, $\frac{4}{6}$
7. $\frac{2}{3}$, $\frac{5}{7}$, $\frac{4}{9}$	8. $\frac{14}{17}$, $\frac{3}{16}$, $\frac{5}{15}$	9. $\frac{9}{14}$, $\frac{18}{19}$, $\frac{7}{10}$
10. $\frac{15}{18}$, $\frac{6}{13}$, $\frac{2}{8}$	11. $\frac{1}{3}$, $\frac{7}{11}$, $\frac{5}{12}$	12. $\frac{9}{16}$, $\frac{6}{10}$, $\frac{10}{13}$
13. $\frac{3}{6}$, $\frac{14}{15}$, $\frac{8}{19}$	14. $\frac{6}{14}$, $\frac{4}{5}$, $\frac{5}{7}$	15. $\frac{3}{4}$, $\frac{2}{17}$, $\frac{4}{9}$
16. $\frac{1}{2}$, $\frac{11}{12}$, $\frac{5}{18}$	17. $\frac{8}{14}$, $\frac{2}{10}$, $\frac{10}{11}$	18. $\frac{1}{4}$, $\frac{12}{13}$, $\frac{17}{18}$
19. $\frac{13}{15}$, $\frac{4}{5}$, $\frac{3}{16}$	20. $\frac{2}{3}$, $\frac{6}{7}$, $\frac{3}{19}$	21. $\frac{1}{9}$, $\frac{4}{6}$, $\frac{1}{2}$
22. $\frac{7}{8}$, $\frac{12}{18}$, $\frac{16}{17}$	23. $\frac{12}{13}$, $\frac{7}{14}$, $\frac{2}{6}$	24. $\frac{3}{16}$, $\frac{1}{4}$, $\frac{7}{9}$

Name _____

Mixed Numbers and Improper Fractions

P 9-10

Write each mixed number as an improper fraction.

1. $3\frac{2}{5}$ _____ 2. $6\frac{1}{4}$ _____ 3. $2\frac{1}{12}$ _____ 4. $2\frac{7}{9}$ _____

Write each improper fraction as a mixed number or whole number.

5. $\frac{12}{5}$ _____ 6. $\frac{27}{9}$ _____ 7. $\frac{32}{3}$ _____ 8. $\frac{20}{12}$ _____

9. **Number Sense** Matt had to write $3\frac{8}{24}$ as an improper fraction. Write how you would tell Matt the easiest way to do so.

10. Jill has 4 granola bars. Each bar weighs $\frac{2}{3}$ oz. Write the weight of Jill's granola bars as an improper fraction and as a mixed number.

11. Nick had $1\frac{3}{4}$ gal of milk. How many pints of milk does Nick have? (Hint: There are 8 pt in 1 gal.)

Test Prep

12. Which is NOT an improper fraction equal to 8?

A. $\frac{24}{3}$

B. $\frac{49}{7}$

C. $\frac{56}{7}$

D. $\frac{64}{8}$

13. **Writing in Math** Write three different improper fractions that equal $4\frac{2}{3}$.

Name _____

Recreation Time!

E 9-10
REASONING

1. Timothy has computer class 3 times a week. Each class is 45 min long. How many hours of computer class does Timothy have per week? In 4 weeks?

2. Alex practices soccer 4 times a week for 50 min each practice. How many total hours does Alex practice soccer per week? In 2 weeks?

3. Laurel went swimming 7 times in 3 weeks. One time she swam for $1\frac{1}{2}$ hr. The other 6 times she swam for 30 min each time. How many hours did Laurel swim in 3 weeks?

4. Caitlin, Cindy, and Connie went jogging at the recreation center. Caitlin jogged for 40 min, Cindy jogged for 30 min, and Connie jogged for 70 min. What was the total amount of time they jogged altogether?

5. Dena takes karate classes every Tuesday and Thursday. Each class is 55 min long. How many hours of class will Dena have in 3 weeks?

6. Jack spent $9\frac{3}{4}$ hr practicing ice hockey with his team. How many $\frac{1}{4}$ hr is that?

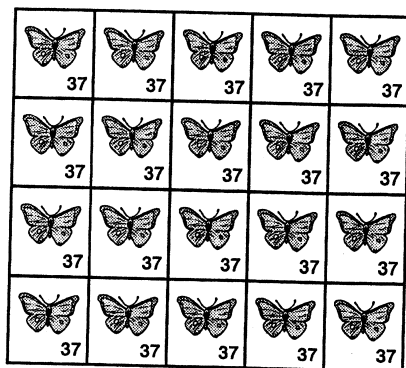
7. Misa takes 3 dance classes each week. Ballet class is 45 min long, modern dance is 50 min long, and jazz dance is 35 min long. How many hours of dance class does Misa have in 2 weeks?

8. Carlos practices piano every Monday, Wednesday, and Friday for 35 min each day. He also practices guitar every Tuesday, Thursday, and Saturday for 30 min each day. How many hours does Carlos spend practicing musical instruments each week?

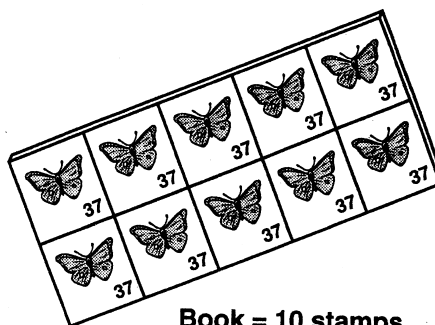
Name _____

Stamping Fractions

**E 9-11
REASONING**



Sheet = 20 stamps



Book = 10 stamps

Use the pictures of the stamps to answer the questions.

1. Which is a greater number of stamps, $2\frac{3}{10}$ books of stamps or $1\frac{1}{20}$ sheets of stamps?

2. Would you rather have $2\frac{1}{10}$ sheets of stamps or $3\frac{9}{10}$ books of stamps?

3. Brandon used $\frac{28}{10}$ books of stamps, and Lindsey used $1\frac{3}{4}$ sheets of stamps. Who used more stamps?

4. Thomas has $3\frac{1}{5}$ books of stamps, and Ron has 28 stamps. Who has more stamps?

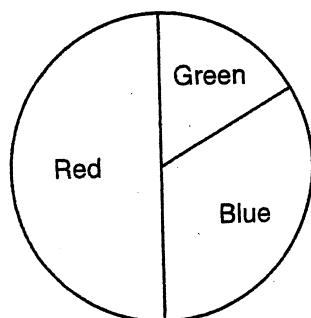
5. The stamps in the sheet and book shown above cost the same amount per stamp. Which costs more, $2\frac{3}{20}$ sheets or $4\frac{2}{5}$ books?

6. Scott bought 2 books of stamps and 1 sheet of stamps. He used three stamps each day for 3 days. How many books of stamps did Scott have left after 3 days?

Circle Graphs

Car Sales Auto World sold 12 cars last week. The circle graph shows the fraction of the cars sold that were each color. Write the fraction for each color.

Car Colors



1. Red _____
2. Blue _____
3. Green _____
4. Make a circle graph using the data in the table. Start by dividing a circle into 8 equal parts.

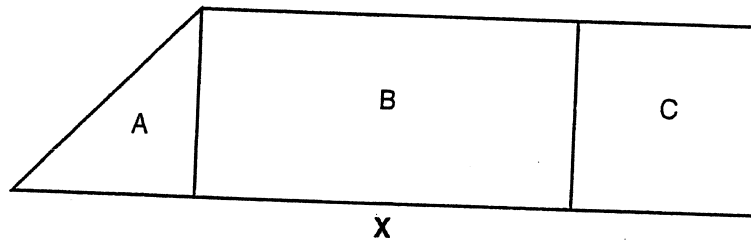
Favorite Sport

Sport	Number of People
Soccer	3
Tennis	4
Golf	1

5. **Writing in Math** Explain how you made the circle graph in Exercise 4.

Shape Fractions

E 9-13
VISUAL THINKING

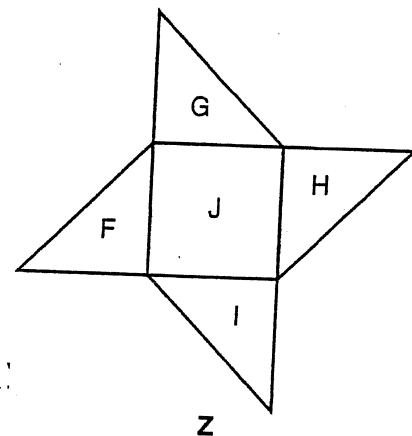


1. What fraction of trapezoid X is square C? Explain your answer.

2. What fraction of trapezoid X is rectangle B? Explain your answer.

3. What fraction of trapezoid X is triangle A? Explain your answer.

4. What fraction of shape Z is square J?
Explain your answer.



5. What fraction of shape Z is triangle G? Explain.

Fractions 9-16 - 9-14

(Answer ID # 0900688)

Write each improper fraction as a mixed number in simplest form.

1. $\frac{13}{2}$	2. $\frac{14}{5}$	3. $\frac{55}{12}$	4. $\frac{8}{6}$
5. $\frac{33}{9}$	6. $\frac{43}{8}$	7. $\frac{13}{3}$	8. $\frac{86}{16}$
9. $\frac{20}{11}$	10. $\frac{113}{17}$	11. $\frac{17}{7}$	12. $\frac{61}{18}$
13. $\frac{12}{8}$	14. $\frac{60}{13}$	15. $\frac{87}{15}$	16. $\frac{13}{6}$

Write each mixed number as an improper fraction in simplest form.

1. $6\frac{1}{5}$	2. $4\frac{6}{7}$	3. $5\frac{7}{8}$	4. $2\frac{9}{12}$
5. $1\frac{2}{9}$	6. $3\frac{1}{2}$	7. $4\frac{5}{10}$	8. $2\frac{3}{6}$
9. $6\frac{1}{11}$	10. $1\frac{13}{14}$	11. $3\frac{14}{16}$	12. $5\frac{2}{4}$
13. $1\frac{9}{14}$	14. $6\frac{1}{3}$	15. $2\frac{2}{9}$	16. $4\frac{4}{11}$

Fill in the missing number.

1. $\frac{7}{2} = 3\frac{\boxed{}}{2}$	2. $\frac{\boxed{}}{7} = 5\frac{6}{7}$	3. $\frac{13}{\boxed{}} = 6\frac{1}{2}$
4. $\frac{\boxed{}}{10} = 4\frac{3}{10}$	5. $\frac{13}{8} = \boxed{}\frac{5}{8}$	6. $\frac{29}{11} = 2\frac{7}{\boxed{}}$
7. $\frac{11}{4} = \boxed{}\frac{3}{4}$	8. $\frac{41}{\boxed{}} = 6\frac{5}{6}$	9. $\frac{21}{5} = 4\frac{\boxed{}}{5}$
10. $\frac{25}{17} = 1\frac{8}{\boxed{}}$	11. $\frac{\boxed{}}{9} = 5\frac{5}{9}$	12. $\frac{\boxed{}}{10} = 3\frac{3}{10}$
13. $\frac{9}{4} = 2\frac{\boxed{}}{4}$	14. $\frac{21}{\boxed{}} = 4\frac{1}{\boxed{}}$	15. $\frac{69}{\boxed{}} = 6\frac{3}{\boxed{}}$

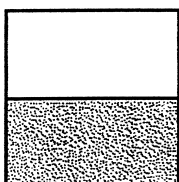
Chapter 9 Review

Multiple Choice

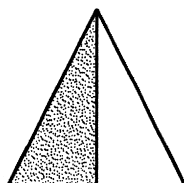
Identify the letter of the choice that best completes the statement or answers the question.

_____ 1. Which does NOT show $\frac{1}{2}$ of the region shaded?

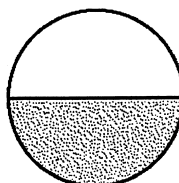
a.



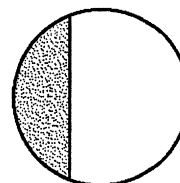
b.



c.

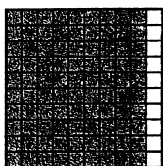


d.

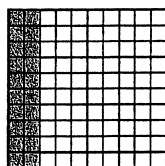


_____ 2. Which shows $\frac{82}{100}$ of the region shaded?

a.



b.



c.

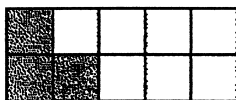


d.

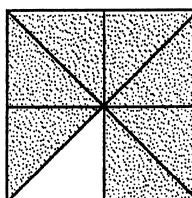


_____ 3. Land covers about $\frac{3}{10}$ of the Earth's surface. Which picture shows this part shaded?

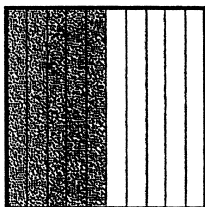
a.



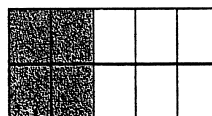
c.



b.



d.



_____ 4. Which shows $\frac{4}{8}$ of the set shaded?

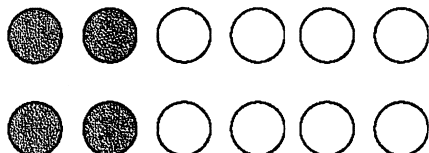
a.



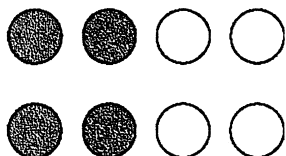
b.



c.



d.



_____ 5. Which fraction is NOT equivalent to $\frac{2}{10}$?

a. $\frac{8}{40}$

b. $\frac{5}{25}$

c. $\frac{5}{30}$

d. $\frac{1}{5}$

_____ 6. The book, *The Rainbow Fish*, has a story about a fish who gains friendships and happiness by sharing. About $\frac{1}{2}$ of all the vertebrates on Earth are fish. Which fraction is NOT equivalent to $\frac{1}{2}$?

a. $\frac{4}{10}$

b. $\frac{5}{10}$

c. $\frac{4}{8}$

d. $\frac{6}{12}$

_____ 7. Which two numbers do NOT have a common factor of 5?

a. 5 and 10

c. 15 and 19

b. 10 and 15

d. 20 and 25

_____ 8. Which fraction is greater than $\frac{10}{12}$?

a. $\frac{9}{12}$

b. $\frac{11}{12}$

c. $\frac{7}{12}$

d. $\frac{8}{12}$

_____ 9. Which fraction is less than $\frac{1}{2}$?

a. $\frac{1}{3}$

b. $\frac{7}{8}$

c. $\frac{6}{10}$

d. $\frac{4}{8}$

____ 10. Which of the following is TRUE?

a. $\frac{1}{2} < \frac{5}{10}$

c. $\frac{4}{10} > \frac{6}{10}$

b. $\frac{6}{10} > \frac{1}{2}$

d. $\frac{4}{10} = \frac{1}{2}$

____ 11. Nitrogen makes up about $\frac{3}{4}$ of the gas in our atmosphere. Which fraction is greater than $\frac{3}{4}$?

You may use fraction strips to help.

a. $\frac{4}{10}$

b. $\frac{5}{6}$

c. $\frac{3}{12}$

d. $\frac{1}{8}$

____ 12. Which fraction is greater than $\frac{3}{4}$?

a. $\frac{7}{16}$

b. $\frac{5}{8}$

c. $\frac{10}{20}$

d. $\frac{10}{12}$

____ 13. Which of the following is TRUE?

a. $\frac{1}{2} < \frac{3}{10}$

b. $\frac{9}{10} > \frac{3}{10}$

c. $\frac{1}{2} = \frac{3}{10}$

d. $\frac{9}{10} < \frac{1}{2}$

____ 14. Which fraction is the least?

a. $\frac{1}{9}$

b. $\frac{1}{3}$

c. $\frac{1}{2}$

d. $\frac{1}{10}$

____ 15. This table shows the amounts of spices used in a recipe.

Spices
$\frac{1}{2}$ teaspoon paprika
$\frac{1}{4}$ teaspoon oregano
$\frac{3}{4}$ teaspoon parsley flakes
$\frac{3}{8}$ teaspoon garlic salt

Which spice has the greatest amount used in the recipe?

a. oregano

c. garlic salt

b. paprika

d. parsley flakes

Chapter 9B Review**Multiple Choice**

Identify the letter of the choice that best completes the statement or answers the question.

- _____ 1. Which mixed number is less than $3\frac{1}{3}$?
- a. $4\frac{2}{3}$ b. $3\frac{2}{3}$ c. $4\frac{1}{3}$ d. $2\frac{1}{3}$
- _____ 2. Which of the following is TRUE?
- a. $2\frac{6}{8} > 2\frac{7}{8}$ c. $2\frac{7}{8} > 3\frac{6}{8}$
b. $3\frac{6}{8} < 3\frac{7}{8}$ d. $2\frac{7}{8} < 1\frac{7}{8}$
- _____ 3. James and Jenisa are twins. James weighed $4\frac{1}{2}$ pounds when he was born. Jenisa weighed less than James. How much could Jenisa have weighed?
- a. $4\frac{3}{8}$ pounds c. $4\frac{5}{8}$ pounds
b. $5\frac{5}{8}$ pounds d. $5\frac{3}{8}$ pounds
- _____ 4. Exercise is important in staying healthy. Regular exercise can make the heart stronger, help reduce the risk of heart disease, strengthen bones, and improve your immune system. Jogging, swimming, and walking are good forms of exercise. Which of the following comparisons is TRUE?

JOGGING DISTANCES

Name	Distance
Alfonso	$2\frac{1}{3}$ miles
Chi	$2\frac{2}{3}$ miles
Deshon	$1\frac{1}{4}$ miles
Glen	$1\frac{5}{8}$ miles

- a. Alfonso jogged farther than Chi.
b. Alfonso jogged farther than Deshon.
c. Glen jogged farther than Chi.
d. Glen jogged farther than Alfonso.

Name: _____

ID: A

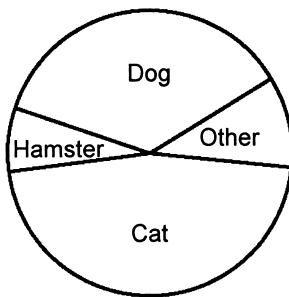
- _____ 5. If you make a circle graph to show the results of the survey, how many equal parts should you divide your circle into?

FAVORITE VEGETABLE SURVEY

Vegetable	Votes
Corn	5
Peas	4
Carrots	3
Green Beans	2
Other	4

- a. 14 parts b. 17 parts c. 18 parts d. 19 parts
- _____ 6. The circle graph shows the favorite pet named by 100 students.

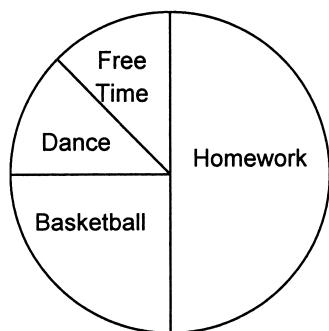
FAVORITE PET



Which of the following best describes the part of the students who chose hamsters as their favorite pet?

- a. More than one third c. More than two thirds
b. Less than one fourth d. More than three fourths

- _____ 7. The graph below shows how Tamika spends her time after school, not counting chores.

TAMIKA'S AFTER SCHOOL TIME

About what fraction of her after school time does Tamika spend dancing and having free time combined?

- a. $\frac{1}{3}$ b. $\frac{3}{4}$ c. $\frac{1}{2}$ d. $\frac{1}{4}$

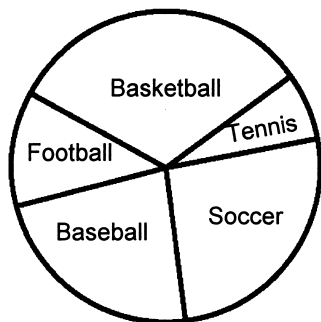
The Alma Dance Center offers classes in the styles of dance shown in the circle graph. The circle graph shows enrollments in the different classes.

DANCE CLASS ENROLLMENT

- _____ 8. Look at the dance class circle graph. In which class is about $\frac{1}{5}$ of the school signed up?
- a. HipHop c. Salsa
b. Ballet d. Jazz
- _____ 9. Look at the dance class circle graph. In which class is about $\frac{1}{3}$ of the school signed up?
- a. Ballet c. Salsa
b. HipHop d. Jazz

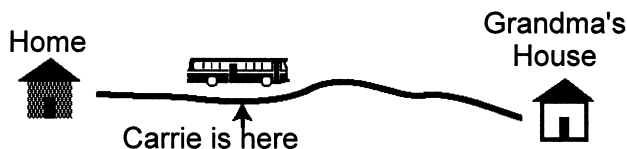
- ____ 10. The graph shows the favorite sport named by 100 people.

FAVORITE SPORT



Which sport or combination of sports received about $\frac{2}{3}$ of the votes?

- a. Football
 - b. Baseball, football, and basketball combined
 - c. Soccer and baseball combined
 - d. Tennis
- ____ 11. Complete the explanation. Carrie is riding a bus from home to grandma's house on the road below. She has gone 7 miles.



Estimate the total distance from home to grandma's house. Carrie has gone about _____ of the way. There are _____, so if each section is 7 miles, the total distance is _____.

- a. $\frac{1}{3}$; 3 thirds in a whole; $3 \times 7 = 21$ miles
- b. $\frac{1}{5}$; 5 fifths in a whole; $5 \times 7 = 35$ miles
- c. $\frac{1}{4}$; 4 fourths in a whole; $4 \times 7 = 28$ miles
- d. $\frac{1}{2}$; 2 halves in a whole; $2 \times 7 = 14$ miles

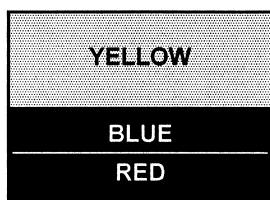
- _____ 12. Yuji's cat, King, weighs $8\frac{1}{4}$ pounds. Megan's cat, Fluffy, weighs $8\frac{1}{8}$ pounds.

Complete the explanation of how to tell which cat weighs more.

I compared the whole numbers. They are the same. So, I compared the fractions. _____?

- a. $\frac{1}{4} = \frac{2}{8}$ and $\frac{2}{8} > \frac{1}{8}$, so $8\frac{1}{4} > 8\frac{1}{8}$. So, King weighs more.
- b. $\frac{1}{4} = \frac{2}{8}$ and $\frac{2}{8} < \frac{1}{8}$, so $8\frac{1}{4} < 8\frac{1}{8}$. So, Fluffy weighs more.
- c. The cats weigh the same; $\frac{1}{4} = \frac{1}{8}$, so $8\frac{1}{4} = 8\frac{1}{8}$.
- d. $\frac{1}{4}$ is to the left of $\frac{1}{8}$ on the number line, so $\frac{1}{4} < \frac{1}{8}$ and $8\frac{1}{4} < 8\frac{1}{8}$. So, Fluffy weighs more.

- _____ 13. The flag of Columbia is shown. Complete the explanation to estimate what fraction of the flag is blue.



I drew a line through the middle of the yellow part so the line is parallel to the top and bottom. With the line, there are _____?

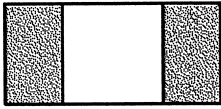
- a. 3 equal parts and 1 is blue, so $\frac{1}{3}$ is blue.
- b. 2 equal parts and 1 is blue, so $\frac{1}{2}$ is blue.
- c. 5 equal parts and 1 is blue, so $\frac{1}{5}$ is blue.
- d. 4 equal parts and 1 is blue, so $\frac{1}{4}$ is blue.

Name: _____

ID: A

Other

14. Is $\frac{2}{3}$ of this rectangle shaded? _____



Explain why or why not.

15. Keisha's list of famous poets shown is $\frac{1}{4}$ finished. How many poets will be on the list when it is complete? _____

My Favorite Famous Poets
Elizabeth Barret Browning
Robert Frost
Henry Wadsworth Longfellow
Edgar Allan Poe

Explain how you got the answer.
